

	Ariel.		Umbriel.		Titania.		Oberon.	
	Pos.	Dist.	Pos.	Dist.	Pos.	Dist.	Pos.	Dist.
April 21	359 ⁰	14 ["]	54 ⁰	17 ["]	303 ⁰	28 ["]	261 ⁰	34 ["]
22	210	13	338	20	251	26	228	37
23	71	11	242	16	207	31	202	41
24	297	12	153	20	173	33	180	44
25	154	14	69	16	138	30	160	43
26	3	14	348	20	90	26	135	39
27	215	13	257	16	41	29	106	35
28	78	11	175	20	4	33	72	35
29	304	12	85	16	331	31	41	38
30	159	14	358	20	289	26	16	42
May 1	8	14	273	15	237	27	355	44

In the night of Jan. 8 *Uranus* passed close to the place in the heavens, where it appeared on the evening of Jan. 11, 1787, when the two bright satellites were discovered by Herschel. In the interval between the two nights *Oberon* has performed 2278 whole revolutions and *Titania* 3523.

Ferndene, Gateshead, Jan. 18th, 1871.

Summary of Sun-spot Observations made with the Kew Photo-Heliograph during the year 1870.

(Communicated by Messrs. Warren De La Rue, B. Stewart, and B. Loewy.)

Months.	Days of Observation.	Days without Spots.	Numbers given to the New Groups in the Catalogue of Sunspots.	Number of New Groups.
January	11	0	No. 1126 to No. 1142	17
February	12	0	„ 1143 „ 1168	26
March	14	0	„ 1169 „ 1199	31
April	22	0	„ 1200 „ 1230	31
May	25	0	„ 1231 „ 1270	40
June	19	0	„ 1271 „ 1309	39
July	18	0	„ 1310 „ 1345	36
August	25	0	„ 1346 „ 1389	44
September	21	0	„ 1390 „ 1420	31
October	18	0	„ 1421 „ 1459	39
November	17	0	„ 1460 „ 1491	32
December	11	0	„ 1492 „ 1528	37
Total	213	0	No. 1126 to No. 1528	403

The year 1870 was characterised by an exuberance of solar energy which is without parallel since the beginning of systematic observations (*i. e.* since 1825). The number of observed groups far exceeds that of any previous year; and it appears also from a

cursory comparison with the maximum year's observations, as recorded by Hofrath Schwabe, that the magnitude of the different groups, as well as the average amount of spotted surface during any period of the year, is unprecedented. Since accurate measurements on the area covered by the spots are wanting for any time previous to the Kew Cycle, it is, of course, impossible to speak on this point with absolute certainty.

The latter half of the year shows an increase of no less than thirty-five groups as against the first half; it seems, consequently, not at all certain that the real maximum has been reached or passed.

A very remarkable feature of the groups observed during the year appears to be their extraordinary lifetime. Although the calculation of the heliographic positions is not yet completed, and therefore the most reliable basis for judging on the identity of groups on their return to the visible surface is still wanting, yet there can be no doubt from the observations, that an exceedingly large number of groups completed 3, 4, and even more revolutions, before finally collapsing. Whether this peculiarity in the behaviour of groups belongs to all maximum years,—whether the groups of minimum years are on the whole of a more ephemeral existence,—and further, in what manner the duration of any single group is connected with, or dependent on, its magnitude and the law of periodicity, are questions very forcibly suggested by the observations of the past year.

January 6th, 1871.

Further Notes on the Floor of Plato. By W. R. Birt, Esq.

I have the honour to submit to the notice of the Society some further observations of the spots on the floor of *Plato*. In the *Monthly Notices* for April, 1870, vol. xxx., p. 160, will be found the normal degrees of visibility of the spots for twelve lunations ending March, 1870. The observations have been continued with the same care during the succeeding eight lunations, and now number 1594. The normal degrees of visibility have been determined for eighteen lunations; they are given in the following table :—

No.	Obs.	Vis.	No.	Obs.	Vis.
0	9	·046	9	43	·222
1	194	1·000	10	12	·062
2	9	·046	11	28	·144
3	174	·897	12	6	·031
4	173	·892	13	31	·160
5	99	·510	14	84	·433
6	43	·222	15	3	·015
7	22	·113	16	57	·294
8	3	·015	17	161	·830